



**Wastewater
Treatment Project**
Treated for a cleaner future

CRD Wastewater Treatment Project
Project Charter

Updated: April 17, 2018

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1 Project Background

The Wastewater Treatment Project (the “WTP” or the “Project”) will provide the Capital Regional District’s (“CRD”) Core Area with wastewater treatment that meets both provincial and federal wastewater regulations.

The CRD provides regional services including the regional sewage system which serves a population of approximately 320,000 in the Core Area. The Core Area includes seven municipalities and two First Nations within the CRD with a total land area of approximately 215 km². These communities are the Cities of Victoria, Langford, and Colwood, the Districts of Oak Bay and Saanich, the Township of Esquimalt, the Town of View Royal, and the Songhees and Esquimalt Nations.

Currently all wastewater from the Core Area is conveyed to preliminary treatment facilities where it is screened prior to marine discharge. Preliminary treatment is provided by 6 mm fine screening to remove rocks/solids, plastic, and floatable materials. The removed materials are trucked to, and disposed of, at the Hartland Landfill. No other treatment occurs prior to the wastewater being discharged into the marine environment from one of two outfalls, located at Clover Point and Macaulay Point. The CRD is the last major coastal community in North America discharging untreated sewage into the marine environment.

Provincial Municipal Wastewater Regulations (“MWR”) under the *Environmental Management Act* came into effect in 2012 to, “protect public health and the environment”. The MWR prescribes the minimum standards of municipal wastewater quality for marine water, fresh water, or ground discharge.

Federal Wastewater System Effluent Regulations (“WSER”) under the *Fisheries Act* establish effluent quality performance standards. WSER's objective is to decrease the level of deleterious and harmful substances discharged through wastewater effluent. Facilities discharging effluent quality not equivalent to or better than the secondary treatment performance standards are required to be upgraded. Facilities considered high risk, such as the Macaulay Point and Clover Point Outfalls must be upgraded by December 31, 2020.

Failure to comply with the WSER and the MWR could result in regulatory enforcement action in the form of prosecution, fines, imprisonment, and other remedial penalties.

In order to meet federal and provincial regulations, on May 25, 2016 the Regional Board of the CRD (the “CRD Board”) established the Wastewater Treatment Project Board (the “Project Board”) under Bylaw 4109 (the “CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016”) for the purposes of administering the Project. The CRD Board adopted by resolution terms of reference (“Terms of Reference”) for the Project Board for the purposes of establishing principles governing the WTP. The Terms of Reference are attached as Schedule “A” to the CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016.

On May 25, 2016 the CRD Board also delegated certain of its powers, duties and functions to the Project Board under Bylaw 4110 (the “CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016”).

The CRD asked the Project Board to review the wastewater treatment issues and, by September 2016, recommend to the CRD and senior levels of government a plan to comply with the law and to preserve senior government funding.

The Project Board heard delegations and presentations from the public, industry professionals, and a CRD Director. The Project Board Chair and Vice Chair also met with staff from the CRD and all of the Core Area municipalities, and with Esquimalt and Songhees Nations representatives.

The Project Board reviewed the previous technical work and extensive public commentary and developed a methodology to review and evaluate all options. This methodology included evaluation of a large number of options to identify a short list that best addressed the Project goals.

The Project Board developed detailed cost estimates for the short-listed options, ranked the short list using triple bottom line (economic, social and environmental) criteria, and identified the best option. This option was the basis of the final report of the Project Board with respect to its recommendation for the WTP, dated September 7, 2016 (the “Final Report”).

On September 14, 2016 the CRD Board received the Final Report and approved the business case attached as Appendix 1 (the “Business Case”) to the Final Report. The Business Case established the WTP control budget (the “Control Budget”) of \$765 million.

Following the CRD Board’s approval of the Business Case, the CRD submitted amendment number 11 (“Amendment 11”) to the Core Area Liquid Waste Management Plan (“CALWMP”) to the British Columbia Ministry of Environment. The CALWMP is a 25-year plan under the Environmental Management Act which outlines the CRD’s wastewater management strategies, including wastewater treatment.

On September 30, 2016, the British Columbia Ministry of Environment provided conditional approval of Amendment 11 to the CALWMP, and on November 18, 2016 provided a revised conditional approval that superseded the September 30, 2016 approval. The November 18, 2016 conditional approval clarified: that primary treatment is to be guaranteed for Clover Point catchment flows of up to three times average dry weather flows; and that a definitive plan providing a solution for the beneficial reuse of biosolids that does not incorporate multi-year storage of biosolids within a biocell is to be submitted to the British Columbia Ministry of Environment by June 30, 2019.

As the focus of the WTP is to treat wastewater, the CRD will undertake a separate process, with the participation of municipalities and First Nations, to review its regional waste management policy and develop a definitive plan for the beneficial reuse of biosolids and integrated resource management.

Amendment 11 and the Business Case sets out the delivery scope and associated treatment facility performance requirements for the WTP as well as the expected funding sources.

This Project Charter defines the parameters and mandate for the Project Director and the Project Leadership Team to execute and deliver the WTP.

In accordance with the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016 the Project Board has appointed a Project Director to oversee all aspects of the Project.

2 Project Vision and Mission

The Project vision as outlined in the Terms of Reference is as follows:

- Deliver a sewage treatment and resource recovery system that is innovative, achievable and optimizes benefits - economic, social and environmental (including climate change mitigation) - for the long term.
- Approach the Project from the perspective that waste materials should be treated as resources and managed as such, with a long term objective to create a system that supports the principles of Integrated Resource Management ("IRM").
- Give consideration to, and reflect, public input received with an objective of being responsive to community values and concerns.

The Project mission is to safely build a proven, environmentally and fiscally responsible wastewater treatment system so that the Core Area complies with federal and provincial wastewater regulations by December 31, 2020.

3 Project Goals and Key Performance Indicators (KPIs)

3.1 Goals

The Terms of Reference include the following goals, which were established to support achieving the vision outlined above:

- Meet or exceed federal regulations for secondary treatment by December 31, 2020.
- Minimize costs to residents and businesses (lifecycle costs) and provide value for money.
- Optimize opportunities for resource recovery and greenhouse gas reduction.
- Deliver a solution that adds value to the surrounding community and enhances the livability of neighborhoods.

3.2 Key Performance Indicators

The realization of the Project vision, mission and goals will be monitored through the Key Performance Indicators ("KPI"s) in Table 1.

Table 1- Key Performance Indicators

Key Performance Indicators	
Cost	Deliver the Project within the Control Budget (\$765 million).
Schedule	Deliver the Project by December 31, 2020.
Safety	Deliver the Project safely with zero fatalities and a total recordable incident frequency ("TRIF") of no more than 1*.
Regulatory Requirements	Deliver the Project such that the Core Area complies with provincial and federal wastewater regulations.
Environment	Protect the environment by meeting all legislated environmental requirements and optimizing opportunities for resource recovery and greenhouse gas reduction.
Stakeholders	Continue to build and maintain positive relationships with First Nations, local governments, communities, and other stakeholders.

* A TRIF of no more than 1 means that there is 1 or fewer recordable incidents (being a work-related injury or illness that requires medical treatment beyond first aid or causes death, days away from work, restricted work or transfer to another job, or loss of consciousness) for every 200,000 person-hours of work.

The Project Director will report performance against these KPIs to the Project Board on a monthly basis.

4 Safety

The Project Management Plan will include a Safety Management Plan for the Project. In addition to the Project-level Safety Management Plan, each contractor will be responsible for developing their own site-specific Safety Management Plan.

The Prime Contractor role will be fulfilled by each construction contractor and the Project Leadership Team will validate that each contractor is meeting their safety requirements through a robust audit program.

5 Project Scope

The overall scope of the Project includes three major Project components as follows and as outlined in Figure 1:

McLoughlin Point Wastewater Treatment Plant

- A 108 megalitre/day wastewater treatment plant (the "McLoughlin Point WWTP") at McLoughlin Point in Esquimalt that will treat sewage to a tertiary level consistent with federal wastewater treatment regulations;
- A cross-harbour undersea forcemain (the "Victoria Harbour Crossing") from Ogden Point to the McLoughlin Point WWTP (approximately 1000 metres in length); and

- A marine outfall (the “McLoughlin Marine Outfall”, approximately 1800 metres in length) for discharging the treated effluent from the McLoughlin Point WWTP into the marine environment.

Residuals Treatment Facility (“RTF”)

- The residual solids produced by the WWTP will be processed into Class A biosolids, as defined in British Columbia’s Organic Matter Recycling Regulation, at a treatment facility (“Residuals Treatment Facility” or “RTF”) located at the CRD’s Hartland Landfill site in Saanich;
- The Class A biosolids will be available for beneficial reuse.

Conveyance System

- Residual Solids Conveyance Line: this includes two pipelines along with four small pump stations. The two pipelines will be installed in a common trench where possible and will connect the McLoughlin Point WWTP to the RTF:
 - A 200mm pipeline approximately 18.5km in length and four inline pumping stations will convey the residual solids from the WWTP to the RTF;
 - A 350mm pipeline approximately 11.5km in length will return the resulting centrate liquid from the RTF back to the CRD’s existing Marigold pumping station. Flows from the Marigold pumping station will be directed to the McLoughlin Point WWTP through the existing collection system for treatment and then discharge out the new McLoughlin Point Marine Outfall.
- Macaulay Point catchment: the Macaulay Point catchment area conveyance upgrades include three main components:
 - The new Craigflower Pump Station was constructed to replace an older, smaller lift station to convey the increasing wastewater flows generated by View Royal, Colwood, Langford, Songhees First Nation and Esquimalt First Nation to the Macaulay Point Pump Station;
 - Macaulay Point Pump Station will be upgraded (the “Macaulay Point Pump Station Upgrade”) to increase the pumping capacity and so that the wastewater flows can be conveyed to the McLoughlin Point WWTP; and
 - A new forcemain (the “Macaulay Point Forcemain”) will be constructed from the Macaulay Point Pump Station to convey all wastewater flows from the Macaulay Point catchment area to the McLoughlin Point WWTP.
- Clover Point catchment: the Clover Point catchment area conveyance upgrades include four main components:
 - Clover Point Pump Station will be upgraded to increase pumping capacity and upgrade the headworks to include grit removal and screening to convey the wastewater flows to the treatment plant at McLoughlin Point;
 - A new forcemain (the “Clover Point Forcemain”) will be constructed from Clover Point Pump Station to connect into the Victoria Harbour Crossing at Ogden Point to convey all wastewater flows from the Clover Point catchment area to the McLoughlin Point WWTP;
 - Currie Pump Station upgrade (the “Currie Pump Station Upgrade”), pipeline twinning (the “East Coast Interceptor Twinning”) and Trent siphon extension (the “Trent Siphon Extension”) will be completed to increase the conveyance capacity for wastewater flows to Clover Point Pump Station; and

- The Arbutus attenuation tank (the “Arbutus Attenuation Tank”) will be constructed to attenuate the wastewater flows entering the East Coast Interceptor from the Saanich East / North Oak Bay area to alleviate system overflows downstream.

The following items were included in the Final Report and referenced in the Business Case, however, either by jurisdiction or because of subsequent discussions, they are not within the scope of the Project Charter or the Project Director’s accountabilities:

- a) Advance studies for a wastewater treatment proposal in Colwood: provision for this was included in the Business Case but as a result of subsequent discussions between the CRD and Colwood a \$2 million reserve has been established;
- b) Comprehensive planning and consultation process to develop a waste policy, including management of municipal solid and biosolid waste streams as part of an integrated resource management plan. This process is being led by the CRD as a separate process and will culminate in the submission to the BC Ministry of Environment of a plan for the beneficial reuse of biosolids by June 30, 2019; and
- c) The development of a multi-year plan to improve CRD sewage facilities to mitigate their impacts on host communities.

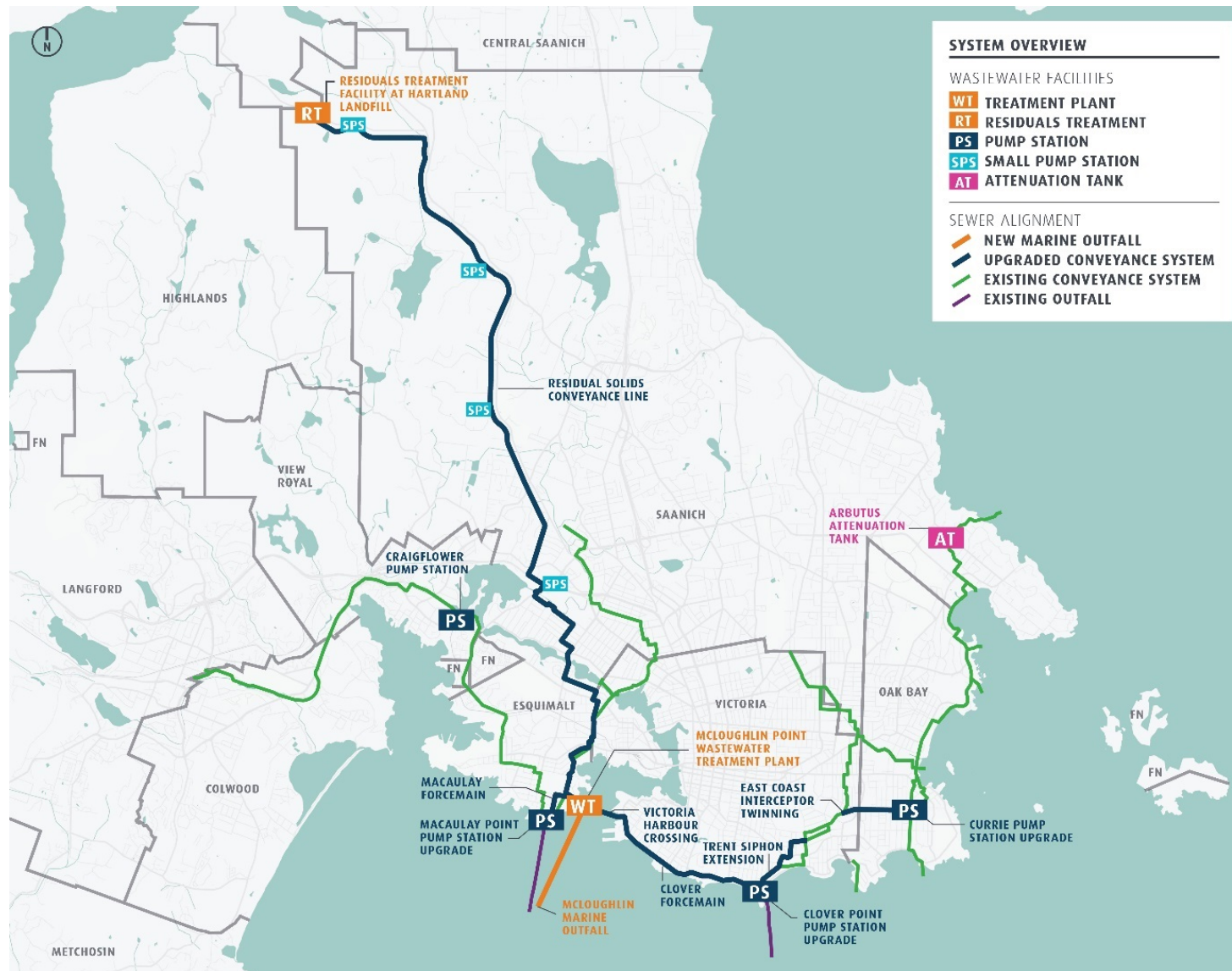


Figure 1- WTP Diagram

6 Project Schedule

The WTP's schedule has been developed to achieve the Project goal of meeting or exceeding federal regulations for secondary treatment of wastewater by December 31, 2020. A high-level schedule is presented in Appendix 1 and key milestones are summarized in Table 2. The anticipated timing for key permits, rights of way and licences to be obtained by the CRD is presented in section 12.

Table 2- Key Milestones

Key Milestones	Quarter
<i>McLoughlin Point Wastewater Treatment Plant</i>	
Construction Start	Q2 2017
WWTP Substantial Completion	Q4 2020
<i>Residuals Treatment Facility</i>	
Residuals Treatment Facility Construction Start	Q1 2018
Residuals Treatment Facility Construction End	Q4 2020
<i>Conveyance System: Completion of Construction</i>	
Residual Solids Conveyance Line	Q2 2020
Macaulay Point Pump Station	Q3 2020
Macaulay Point Forcemain	Q3 2020
Clover Forcemain	Q1 2020
Clover Point Pump Station	Q2 2020
Currie Pump Station	Q4 2020
Currie Forcemain	Q1 2020
ECI/Trent Twinning	Q1 2020
Arbutus Attenuation Tank	Q3 2020

This schedule remains subject to optimization as the Project and planning progress.

7 Project Budget

The Business Case established the Control Budget of \$765 million.

A top-down estimating approach was used to establish the Control Budget. The Project Leadership Team allocated the Control Budget between the three major Project components based on a bottom-up estimating approach and a series of risk workshops. On June 6, 2017 the Project Board approved the updated allocated Control Budget and the Project Leadership Team use the updated allocated Control Budget as the basis for the management of the budget and financial reporting. Table 3 shows the allocation of the Control Budget into the three major components

Table 3- Control Budget

Project Component	Project Costs (Millions, \$)
McLoughlin Point Wastewater Treatment Plant	\$385
Residuals Treatment Facility	\$189
Conveyance System	\$192
Total Costs	\$765

8 Funding

The CRD has received funding support from senior levels of government for the Project representing approximately 60% of the WTP capital costs. Table 4 contains a summary of all sources of funding. All amounts stated are in millions of dollars.

Table 4- Funding

Sources of Funding	McLoughlin Point Wastewater Treatment Plant	Residuals Treatment Facility	Conveyance System	Total
PPP Canada ⁽¹⁾		\$41		\$41
Building Canada Fund ⁽²⁾	\$120			\$120
Green Initiative Fund ⁽³⁾			\$50	\$50
Provincial Government ⁽⁴⁾	\$124	\$62	\$62	\$248
Total Federal and Provincial Funding	\$244	\$103	\$112	\$459
Capital Regional District ⁽⁵⁾	\$141	\$86	\$80	\$306
Total Funding	\$385	\$189	\$192	\$765

- (1) The PPP Canada contribution will be released in a single payment upon Substantial Completion of the Residuals Treatment Facility.
- (2) The Building Canada Fund contributions will be released upon review and acceptance of progress claims and progress reports.
- (3) The Green Initiative Fund contributions will be released upon review and acceptance of progress claims and progress reports.
- (4) The Provincial Government funding will partly be released in payments upon the McLoughlin Point Wastewater Treatment Plant and the Residuals Treatment Facility reaching Substantial Completion, and partly upon commissioning.
- (5) The contribution from the CRD will be the remaining balance of costs that will not be funded by the aforementioned federal and provincial governments' contributions. If the Project cost exceeds the Control Budget of \$765 million, the CRD will be required to fund the difference.

9 Key Project Risks and Constraints

An appropriate level of contingency has been included in the Control Budget to allow the Project risks to be managed. The key WTP Project risks and mitigation strategies are listed in Table 5.

Risk workshops have been held to identify the Project risks and develop risk registers. These risk registers are used to manage the risks over the implementation of the Project.

Table 5- Key Project Risks

Key Risk	Mitigation
Project schedule	Project contracts will include terms that require the contractors to mitigate schedule delays and allow for CRD acceleration.
Contamination greater than expected (or other unanticipated adverse site conditions arise)	Contingency allowances have been allocated in the Control Budget to address this risk.
Third party services (e.g. electricity supply) and support services unavailable or inadequate	Early and ongoing engagement and expediting of BC Hydro and other third-party service providers to identify requirements and manage service delivery needs.
Permitting risk	Early and ongoing engagement with permitting authorities. Appropriate allocation of permitting responsibilities between the CRD and the relevant contractor.
Adverse site geotechnical conditions	Appropriate allocation of responsibility for geotechnical positions between the CRD and the relevant contractor. Allowances have been allocated in the Control Budget to address this risk.
Conveyance System impacted due to unanticipated utility conflicts	Contractor to be required to complete checks to confirm utilities with location surveys. Design consultant to identify utility conflicts.

Key Risk	Mitigation
System integration between the WWTP, RTF and Conveyance System components of the Project	Physical and schedule interfaces have and will be clearly delineated in all construction contracts. Use of an integration management plan to address system function integration risks. The Project Team is using a single Owner's engineer (Stantec) to develop the indicative design for all critical project components with significant interfaces. Commissioning and control plans are under-development.
Procurement costs are greater than expected	All construction contracts will be competitively-procured.

In order to meet the federal regulations for treatment of the Core Area’s wastewater by December 31, 2020, the Project schedule is ambitious. While the Project schedule is achievable there is no float. The successful execution of the Project is dependent on multiple parties and governance bodies and their co-operation will be critical to meeting the Project schedule, and therefore maintaining the Project’s budget.

10 Governance

Figure 2 shows the high-level Project governance structure. The primary responsibilities of the entities identified in the governance structure are outlined below.

CRD BOARD

The CRD Board established the Project Board through the CRD Core Area Wastewater Treatment Board Bylaw No. 1, 2016, and delegated certain of its powers, duties and functions to the Project Board under the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016. Notwithstanding the delegation of authority from the CRD Board to the Project Board, approval from the CRD Board is required for any alteration to the scope, schedule or budget of the Project that would result in the Project not meeting provincial and federal regulations governing the Project, exceeding approved funding for the Project or increasing costs to taxpayers from those stated in the Business Case.

The CRD Board also established the CRD Core Area Liquid Waste Management Committee (“CALWMC”) to oversee and make recommendations to the Board regarding the CALWMP and certain aspects of the Project.

PROJECT BOARD

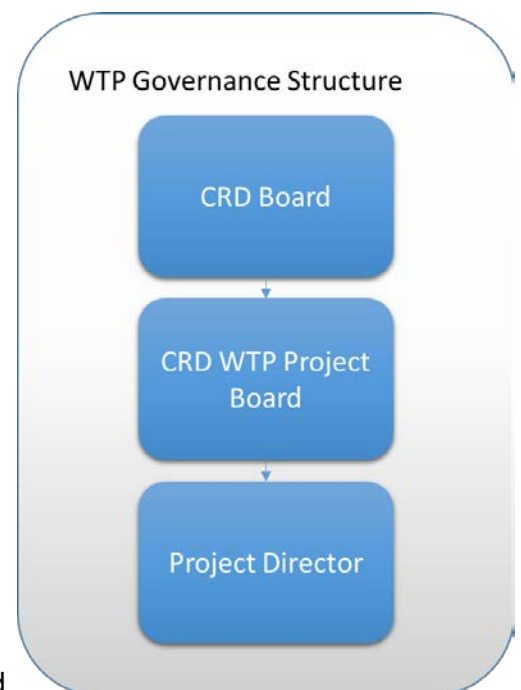


Figure 2- WTP Governance Structure

The Project Board's role and function as defined in the Terms of Reference is as follows:

- Be responsible for overall planning, Project management, site acquisition, expenditures, and liquid waste management planning for the purposes of the Project.
- Select a Project Director to oversee all aspects of the Project.
- Provide direction and guidance to the Project Director on Project matters, including the development of a decision making framework, business priorities, strategies and resource approval, and appropriate Project controls and reporting procedures.
- Manage the development of a comprehensive Business Case for submission to the federal and provincial governments to confirm funding to proceed to Project implementation.
- Appoint or confirm advisors including fairness advisor and conflict of interest adjudicator.
- Oversee Project scope, schedule and budget as the Project progresses through planning, procurement and implementation phases, with particular attention to risk identification and risk management.
- Work with the Project Director to resolve material issues that may arise over the course of the Project.
- Oversee Project communications, information and consultation activities.

PROJECT DIRECTOR

In accordance with the Terms of Reference, the Project Director is responsible for leading a Project team to plan, procure, and implement the WTP. The Project Director is accountable to the Project Board and accountable for delivering the WTP within the Control Budget of \$765 million, and meeting federal and provincial regulations for treatment of the Core Area's wastewater by December 31, 2020.

10.1 Project Leadership Team

The Project Leadership Team plays a central role in Project planning, execution, communication, and stakeholder management. The Project Leadership Team reports directly to the Project Director and Deputy Project Director and as part of their overall Project execution and delivery responsibilities has the following duties:

- Project execution and delivery;
- Stakeholder relations, communication management and reporting;
- Providing services including: scope, schedule, and cost management; scope and execution strategy design, change management process; and risk management;
- Monitoring engineering and construction activities; and
- Overseeing the Project contractors' safety, environmental and quality performance.

As illustrated in Figure 3, the Project Leadership Team is made up of nine roles. The Project Leadership Team is supported by a Project team with the functions outlined in Appendix 2.

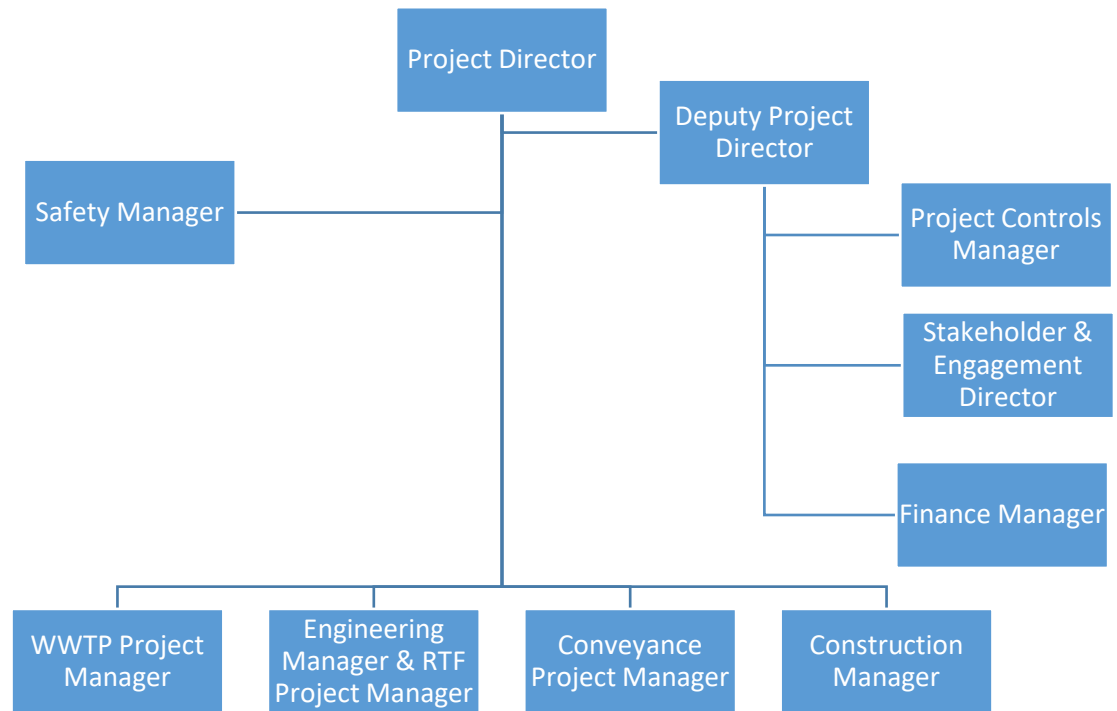


Figure 3- Project Leadership Team

10.2 Project Leadership Team Roles and Responsibilities

The roles and responsibilities of each individual working on the Project are intended to be clear and detailed to ensure a good understanding of what is required from each individual. Descriptions of the Project Leadership Team's primary responsibilities are shown below.

DEPUTY PROJECT DIRECTOR

The Deputy Project Director is directly accountable for managing activities related to governance, finance, project controls, communications and engagement, legal support, properties, and administration of the Project. The Deputy Project Director is also responsible for executive level engagement between the CRD and the Project and supports all functions of the Project Director's role.

SAFETY MANAGER

The Safety Manager is responsible for ensuring that the Project exercises its duty of care in providing a safe and secure work site, and is responsible for ensuring that work is completed safely.

PROJECT CONTROLS MANAGER

The PCM is responsible for managing and coordinating activities related to project controls in a manner that contributes to the successful execution of the three Project components, including:

document control, cost control, schedule, trending and risk and reporting in accordance with the PMP and applicable management plans.

ENGINEERING MANAGER & RTF PROJECT MANAGER

The Engineering Manager is responsible for supporting the Project Director in all technical and engineering matters in order to safely deliver a quality Project on time and within budget that meets the Project key performance indicators.

The Residuals Treatment Facility Project Manager is directly responsible for ensuring that the Residual Treatment Facility is completed on time and on budget and is integrated with the Wastewater Treatment Plant and Conveyance System, and the CRD's Hartland Landfill operations.

CONSTRUCTION MANAGER

The Construction Manager is responsible for ensuring that work is completed to the specified scope and quality and managing the various processes in the planning and execution of construction activities.

DIRECTOR OF COMMUNICATIONS AND STAKEHOLDER ENGAGEMENT

The Director of Communications and Stakeholder Engagement is responsible for overseeing communications and engagement for all aspects of the Project. The Director of Communications and Stakeholder Engagement is accountable for ensuring that the communication obligations within the project-related licences and agreements are met, and oversees and integrates the Contractors' communications activities in accordance with the appropriate contract.

PROJECT MANAGER –MCCLOUGHLIN POINT WWTP

The WWTP Project Manager is directly responsible for ensuring the WWTP is completed on time and on budget and is integrated with the Residuals Treatment Facility and Conveyance System, and the existing Core Area conveyance network

PROJECT MANAGER – CONVEYANCE SYSTEM

The Conveyance System Project Manager is directly responsible for ensuring the Conveyance System is completed on time and on budget and is integrated with the Wastewater Treatment Plant and Residuals Treatment Facility and the existing Core Area conveyance network.

PROJECT MANAGER - RESIDUALS TREATMENT FACILITY

FINANCE MANAGER

The Finance Manager is responsible for the Project's financial controls and processes, including: cost reporting, cash flow management, and administration of the Project's funding agreements. The Finance Manager is also responsible for coordination with the CRD's Finance Department, including with respect to: the CRD's capital plan and budgeting; Municipal Finance Authority debt issuance, administration and financial modeling; implementation of CRD policies and procedures with respect to financial controls; and payment processing.

10.3 Other Associated Roles

The following CRD positions will work closely with the Project Leadership Team: the CRD's Chief Administrative Officer, Chief Financial Officer, General Manager of Integrated Water Services, General Manager of Parks and Environmental Services and Manager of Aboriginal initiatives.

10.4 Delegation of Authority to the Project Director and Deputy Project Director

The Project Director and Deputy Project Director have delegated authority in accordance with Bylaw 4186 (the "CRD Delegation Bylaw No. 1, 2017"). CRD Delegation Bylaw No. 1, 2017 delegates to the CRD's officers and employees the authority to acquire and purchase goods and services on behalf of the CRD, subject to the CRD's purchasing policies and procedures, and signing authority limitations.

11 Project Delivery Strategy

Given the risk profile, overall scale, and diverse scope, the WTP will be delivered through a number of contracts with a variety of contracting strategies, as summarized in Table 6.

Table 6- WTP Contracting Strategies

Project Component	Contract	Contracting Strategy
McLoughlin Point WWTP	McLoughlin Point Wastewater Treatment Plant	DBF
Residuals Treatment Facility	Residuals Treatment Facility	DBFOM
Conveyance System*	Residual Solids Conveyance Line	DBB
	Macaulay Point Pump Station and Macaulay Forcemain	DB
	Clover Forcemain	DBB
	Clover Point Pump Station	DB
	Currie Forcemain and ECI Trent Twinning	DBB
	Currie Pump Station	DBB
	Arbutus Attenuation Tank	DBB

* Note that the Project Development Phase Report outlined nine Conveyance System contracts; these have subsequently been consolidated into seven contracts in order to reduce the integration risk.

12 First Nations

The Core Area lies within or near the traditional territories of 16 First Nations.

The First Nations most closely associated with the Project are the Esquimalt and Songhees, historically known as the “*Lekwungen*”. Their communities are located in the Core Area within several kilometres of the McLoughlin Point WWTP and other important components of the Project. The Esquimalt and Songhees support the goals of the Project and are participants in the Core Area wastewater system through service agreements. The Chiefs from each Nation are members of the Core Area Liquid Waste Management Committee. The Esquimalt and Songhees have leased land in the Victoria Harbour to the Project for use during construction. In recognition of their assistance in the planning and development of the wastewater system, and in recognition of their right to be consulted about the potential impacts of the Project on their Douglas Treaty rights, the CRD has entered into support agreements with each of them. These agreements provide, amongst other things, for an Esquimalt Nation liaison position and a Songhees Nation liaison position for the four year term of the Project. The liaison representatives have been assisting the CRD in its communications with the Esquimalt and Songhees communities, in the administration of protocols involving potential impacts on ancestral remains and their traditional lands, and in the discussion and management of other important issues.

There are four First Nations with communities near the Core Area, but outside the Core Area wastewater system. They are STÁUTW (Tsawout), WSIKEM (Tseycum), WJOLELP (Tsartlip), and BOKECEN (Pauquachin). These Nations are known as the WSÁNEĆ Nations. The CRD is engaged in discussions with the WSÁNEĆ Nations about parts of the Conveyance System and the Residuals Treatment Facility, which are located on municipal roads or CRD lands within their traditional territories. The CRD intends to involve the WSÁNEĆ Nations in the management of heritage issues in their territories that may arise as a result of the construction of the Project.

There are ten other First Nations with Treaty rights in the general vicinity of the Core Area, but primarily fishing rights in the Strait of Juan de Fuca. These Nations are the Scia'new (Beecher Bay), Stz'uminus, Halalt, Penelakut Tribe, T'Sou-ke, Lyackson, MÁLEXEL (Malahat), Lake Cowichan, Cowichan Tribes, and Nanoose First Nation (which is included because it is represented by a tribal association, the Te'mexw Treaty Association, which was formed by some of these Nations). The CRD will be constructing outfall pipes and other infrastructure within or near the Victoria Harbour. The CRD has concluded that the construction and operation of the Project will not conflict with any of the Douglas Treaty rights of these Nations but it intends to keep them informed of Project activities, especially as they relate to beneficial outcomes in the marine environment.

13 Permits

Many permits, rights of way, licenses, and approvals are required to deliver the Project. Project contractors will be responsible for obtaining the majority of the approvals required to construct the Project and to ensure that their construction plans align with regulatory requirements.

The status of some of the permits required for the Project are outlined in Table 7.

Table 7- Permits

Permit / Licence	Anticipated Date
McLoughlin Point WWTP	
Rezoning within the Township of Esquimalt	Obtained
Township of Esquimalt Development Permit	Obtained
Township of Esquimalt Development Permit Amendment	Obtained
Township of Esquimalt Phased Building Permits (Phase 1: Early Works)	Obtained
Department of National Defence Licence (facility siting, works access & laydown, including for Macaulay Point)	Obtained
Municipal Wastewater Regulation (“MWR”) Registration	Q4 2019
Notice from the Director to Construct under Section 40(b) of the MWR	Obtained
McLoughlin Point Harbour Crossing	
Greater Victoria Harbour Authority Licence (works access)	Obtained
Transport Canada Licence (works access)	Obtained
Transport Canada Facility Alteration Permits (horizontal directional drilling and installation of the casing and pipe)	Obtained
Transport Canada lease	Following Completion of Construction
McLoughlin Point Outfall	
Fisheries and Oceans Canada (DFO) <i>Fisheries Act</i> Authorization	Q2 2018
Transport Canada Facility Alteration Permit	Q2 2018
Transport Canada Licence (works access)	Q2 2018
Provincial Tenure Crown Grant	Obtained
Transport Canada Lease	Following Completion of Construction
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018
Macaulay Point Pump Station Upgrade	
Township of Esquimalt Development Permit	Pending
Notice from the Director to Construct under Section 40 (b) of the MWR	Q2 2018
Clover Forcemain	
City of Victoria Licence (works access)	Obtained
Notice from the Director to Construct under Section 40(b) of the MWR	Q2 2018
Clover Point Pump Station	
Rezoning of Clover Point Pump Station Lands	Obtained
City of Victoria Licence Agreement	Obtained
Notice from the Director to Construct under Section 40 (b) of the MWR	Obtained

ECI/Trent Twinning	
City of Victoria Licence (works access)	Q1 2019
Notice from the Director to Construct under Section 40 (b) of the MWR	Q4 2018
Arbutus Attenuation Tank	
Notice from the Director to Construct under Section 40 (b) of the MWR	Q3 2018
Residual Solids Conveyance Line	
Notice from the Director to Construct under Section 40(b) of the MWR	Q2 2018
Residuals Treatment Facility	
District of Saanich Development and Building Permits	Q2 2018
Operational Certificate	Prior to start of RTF operations

14 Engagement and Communications

The Wastewater Treatment Project maintains an ongoing two-way Communications and Engagement Plan to provide Project information to stakeholders, communities and the public and to respond to public inquiries.

There are many stakeholders with an interest in the Project, including those in Table 8.

Table 8 - External Stakeholders

First Nations	Government			Community
	Provincial	Federal	Municipal	
<ul style="list-style-type: none"> ▪ Refer to Section 11 	<ul style="list-style-type: none"> ▪ Ministry of Community Sport and Culture Development ▪ Ministry of Environment 	<ul style="list-style-type: none"> ▪ Canada Department of National Defence ▪ Department of Fisheries and Oceans ▪ Ministry of Transport, Infrastructure and Communities ▪ Transport Canada 	<ul style="list-style-type: none"> ▪ Colwood ▪ Esquimalt ▪ Langford ▪ Oak Bay ▪ Saanich ▪ Victoria ▪ View Royal 	<ul style="list-style-type: none"> ▪ CRD residents ▪ Educational institutions ▪ Environmental groups ▪ General public ▪ Local and regional authorities, businesses and business associations ▪ Local community and neighborhood groups and associations ▪ Local industry ▪ Media

The engagement and communications program includes:

- **Communications Planning**, which involves developing plans and strategies in support of the Project, including integrating the community relations and construction communications functions listed below;
- **Community Relations**, which involves building and maintaining relationships with the public and stakeholders, and keeping them informed through ongoing, two-way communications regarding the Project, and responding to inquiries in an effective and timely manner;
- **Public Engagement**, which involves gathering and receiving public input on certain aspects of the Project, including as defined in the City of Victoria's licence agreements;
- **Media Relations**, which involves providing the media with progress reports and updates on the Project and responding to issues raised by the media; and
- **Construction Communications**, which involves developing a traffic management plan and a process to keep the public and stakeholders advised on a timely basis about matters relating to construction progress, schedules and impacts.

A variety of materials and methods are used to support the implementation of the Communications and Engagement Plan, including a public inquiry program (Project email address and 24/7 information phone line), Project website, social media, construction notifications, community and stakeholder meetings, and door-to-door notifications.

15 Key Reference Documents

Documents relevant to the delivery of the Project include those listed in Table 9.

Table 9- Key Reference Documents

Document
CRD bylaws, including: <ul style="list-style-type: none"> • Bylaw 4109 (the CRD Core Area Wastewater Treatment Project Board Bylaw No. 1, 2016) • Bylaw 4110 (the CRD Core Area Wastewater Treatment Project Board Delegation Bylaw No. 1, 2016) • Bylaw 4186 (the CRD Delegation Bylaw No.1, 2017)
Project Board reports, including: <ul style="list-style-type: none"> • Final report of the Project Board with respect to its recommendation for the WTP, dated September 7, 2016 (the Final Report). • Business case attached as Appendix 1 (the Business Case) to the Final Report.
Core Area Liquid Waste Management Plan
Letter of Conditional Approval of Amendment 11 to the CALWMP from the Minister of Environment Letter of Revised Conditional Approval of Amendment 11 to the CALWMP from the Minister of Environment

Core Area Solid Waste Management Plan Amendment 8
Songhees Nation Support Letter and Agreement
Esquimalt Nation Support Letter and Agreement
Township of Esquimalt Amenity Agreements: <ul style="list-style-type: none"> • Esquimalt Amenity Reserve Fund Administration Agreement • Esquimalt Community Impact Mitigation Operating Agreement • Esquimalt Host Community Impact Five-Year Agreement
Building Canada Fund Agreement
Green Infrastructure Fund Agreement
P3 Canada Fund Financial Agreement
City of Victoria Licences of Occupation: <ul style="list-style-type: none"> • Dallas Roads Works • Clover Point Pump Station
Greater Victoria Harbour Authority Agreements: <ul style="list-style-type: none"> • Right to Enter Agreement • Compensation Agreement
Department of National Defence Agreement

16 Glossary

CALWMC: Core Area Liquid Waste Management Committee

CALWMP: Core Area Liquid Waste Management Plan

CRD: Capital Regional District

DB: Design-Build

DBB: Design-Bid-Build

DBF: Design-Build-Finance

DBFOM: Design-Build-Finance-Operate-Maintain

IRM: Integrated Resource Management

KPI: Key Performance Indicator

MWR: Municipal Wastewater Regulations

RTF: Residuals Treatment Facility

TRIF: Total Recordable Incident Frequency

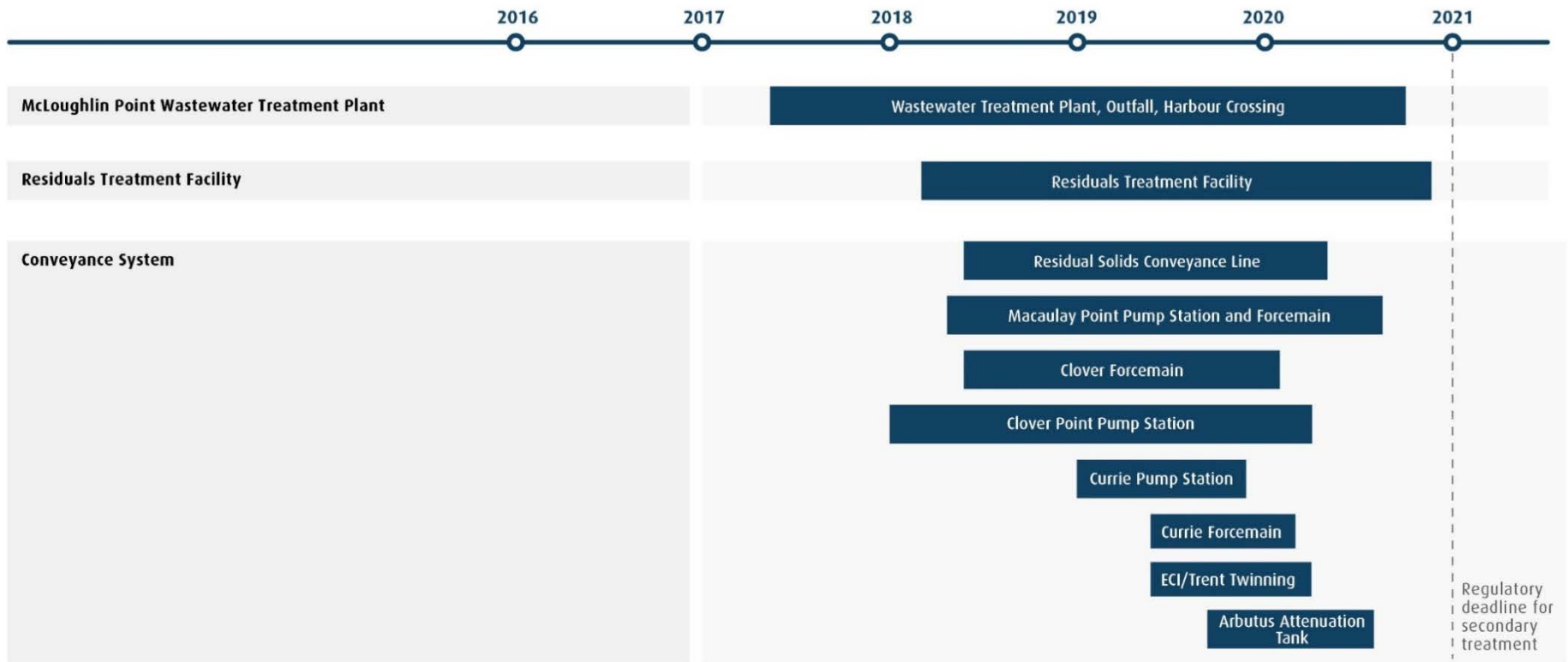
WSER: Wastewater System Effluent Regulations

WTP: Wastewater Treatment Project

McLoughlin WWTP: McLoughlin Point Wastewater Treatment Plant

Appendix 1- High Level Project Schedule

Construction + Commissioning



*Schedule subject to updates as project planning progresses.

Appendix 2- Organization Structure

